



Green Infrastructure approach: linking environmental with social aspects in studying and managing urban forests (GreenInUrbs)

Carlo Calfapietra

**CNR -Institute of Agro-Environmental and Forest Biology -
Porano (TR), Monterotondo Scalo (Roma), ITALY**



**Email: carlo.calfapietra@ibaf.cnr.it
www.carlocalfapietra.com**



What is COST?

COST is the oldest and widest European intergovernmental framework for transnational Cooperation in Science and Technology.

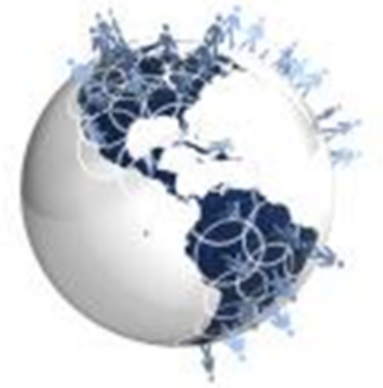
For 40 years COST has supported networking of research activities across all its Member countries (36 today) and beyond.

COST is open to all disciplines, to all novel and ground-breaking S&T ideas, to all categories of partners, to the world where mutual benefit is real.

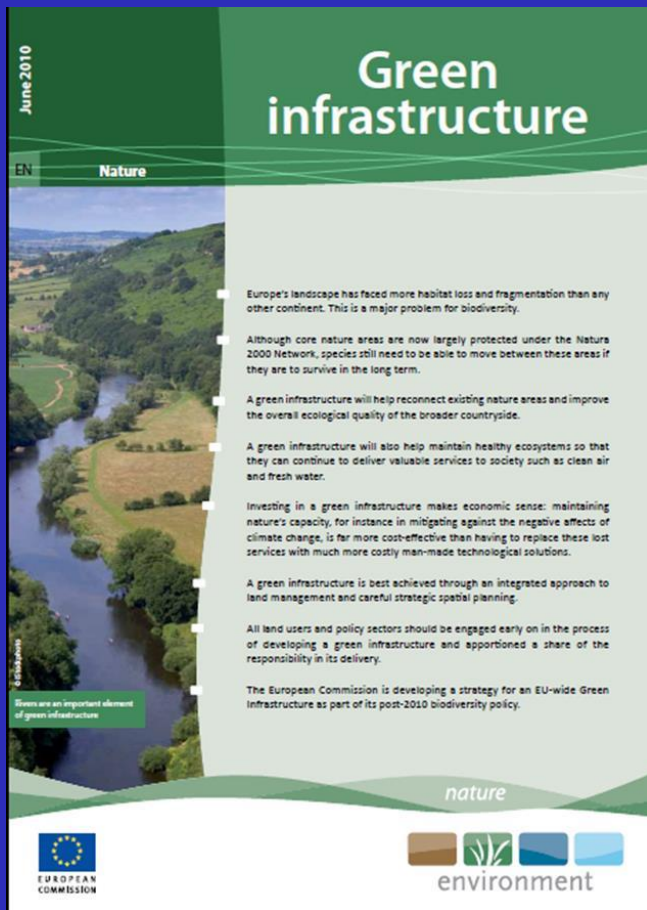
What is funded by COST?

COST Action networking tools:

- Meetings
 - Science management meetings
 - Working Group meetings
 - Scientific workshops & seminars
- Training schools
- Scientific Exchange Visits (STSMs)
- Dissemination + publications



On 19 November 2010, the European Commission organized a conference called **Green Infrastructure Implementation.**



“Green Infrastructure serves the interests of both people and nature. It can be defined as a strategically planned network of high quality green spaces and other environmental features. It should be designed and managed as a multifunctional resource capable of delivering a wide range of benefits and services. Green Infrastructure includes natural and semi-natural areas, features and green spaces in rural and urban, terrestrial, freshwater, coastal and marine areas.”

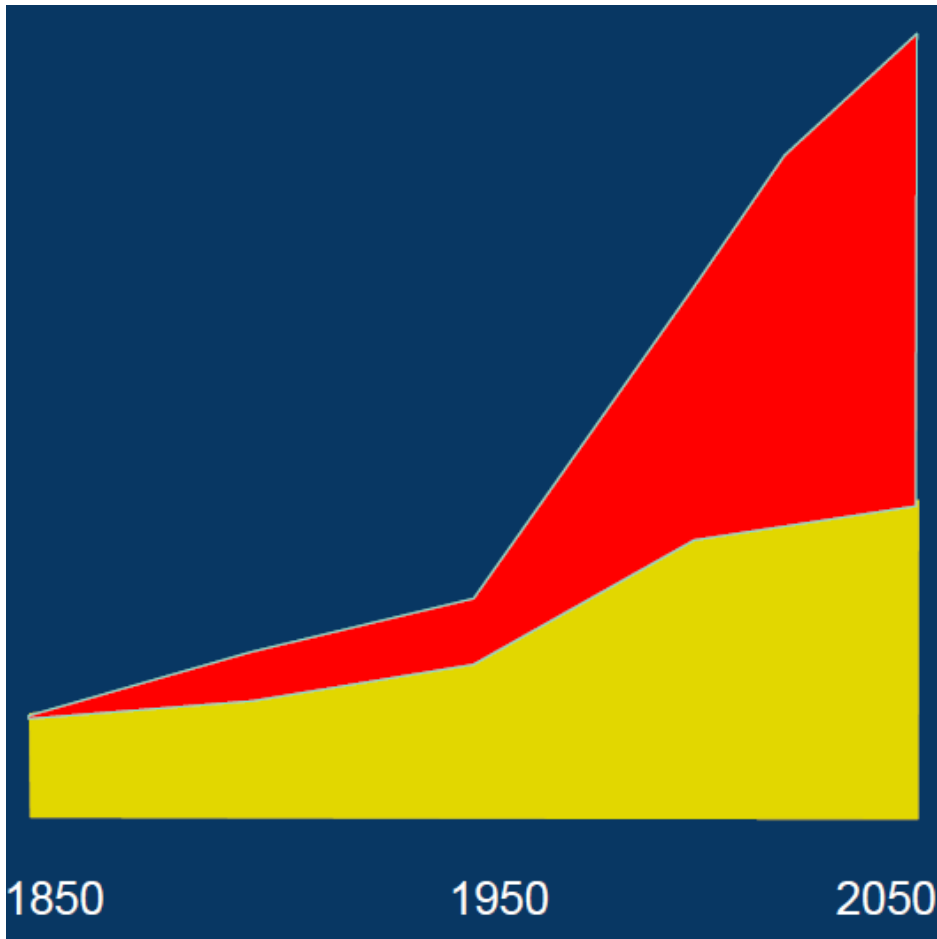
Urban (and peri-urban) forestry

- Trees in streets, squares, parking areas and other “grey spaces” with sealed surfaces.
- Trees in parks and other green spaces such as yards, gardens, and commercial areas.
- Stands of trees that are often referred to as “woodlands” or “woods”.

Randrup et al., 2005



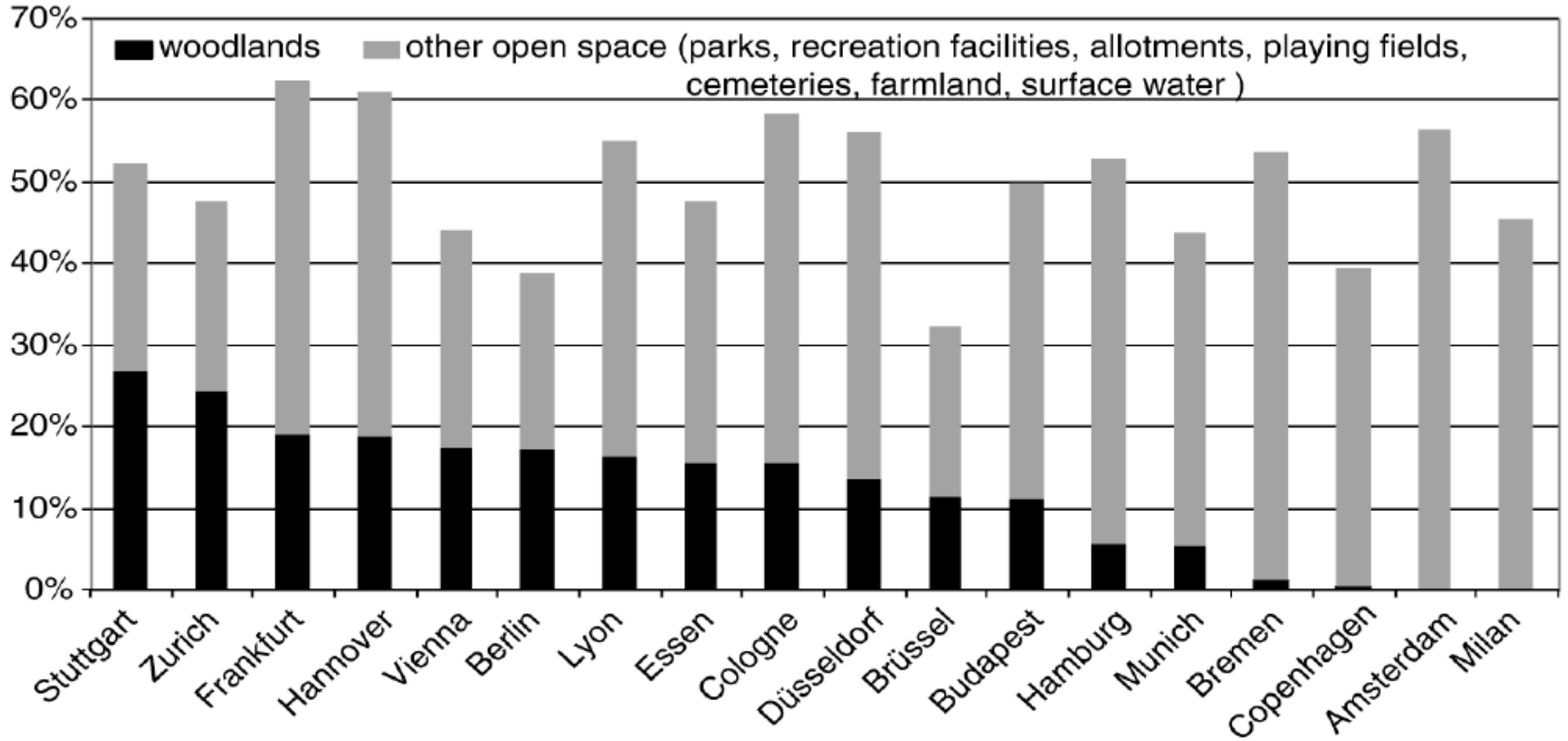
Urban population



70 million annual increase
2 billion new residents

**UN-HABITAT, Financing Urban
Shelter: Global Report on Human
Settlements 2005, pp.4-5.**

Urban green in Europe



From Pauleit et al. 2005

Urban Forests' benefits

Reduce Noise

Modify Urban
Microclimate

Save
Energy

Benefits
society

Reduce
Runoff

Ecological
functions

Reduce
Soil
Erosion

Improve quality
of life

Improve
Air Quality



- **Chair:** Carlo Calfapietra, IT; **Vice-Chair:** Amy Stewart, UK
- **WG1** Environmental services of GI and UF and implications of climate change (Ü Niinemets, EE)
- **WG2** Social/cultural services of GI and UF (C.C.Konijnendijk, DK)
- **WG3** Governance of UF in a GI approach (S. Krajter Ostoic, HR)
- **WG4** Task Force on Integration and Dissemination to stakeholders (G. Sanesi, IT)
- **STSM Coordinator** : Anders Busse Nielsen, SE

External Advisory board

Clive Davies, UK

Elena Paoletti, IT

Andy Kenney, CA

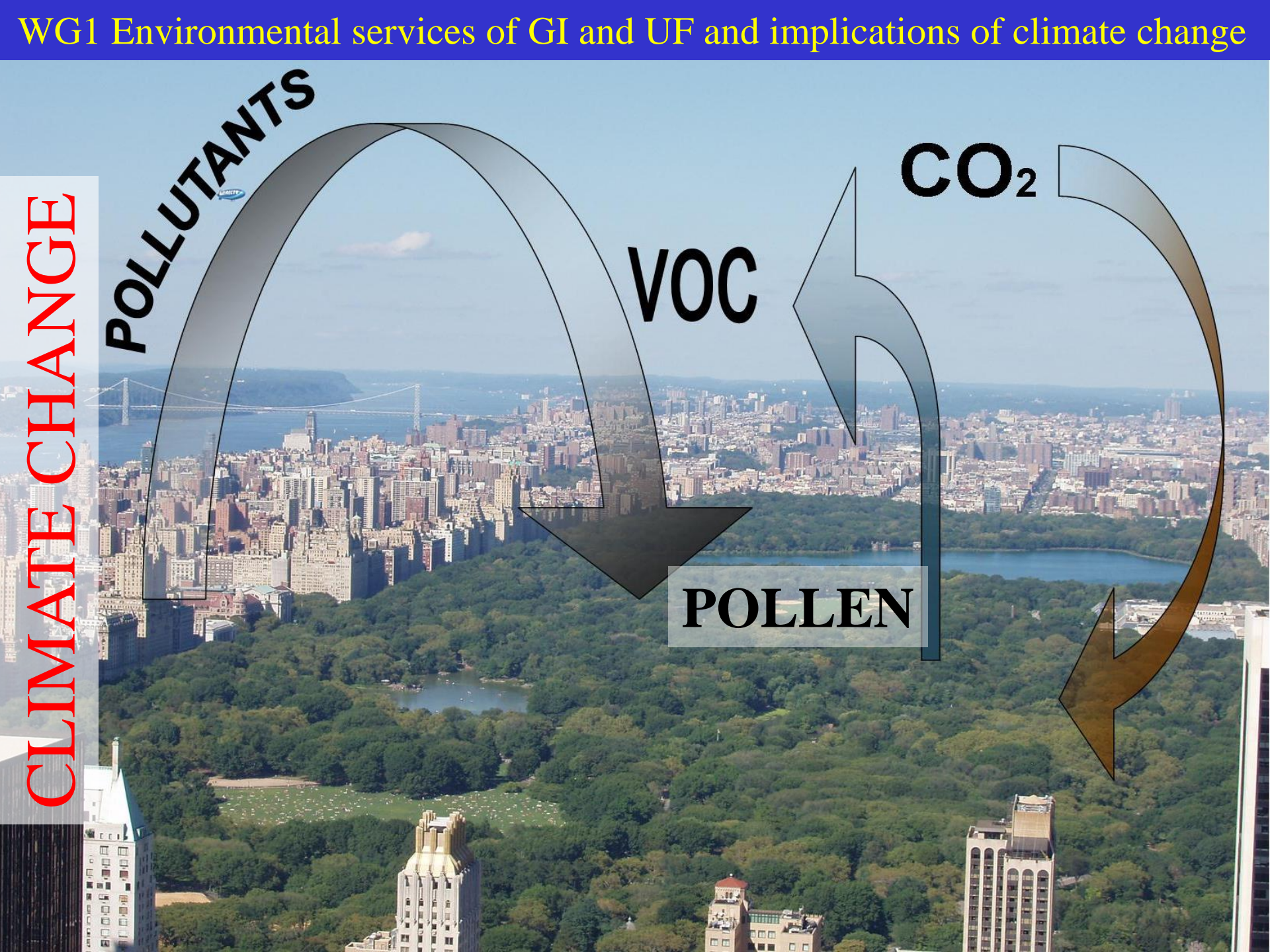
CLIMATE CHANGE

POLLUTANTS

VOC

CO₂

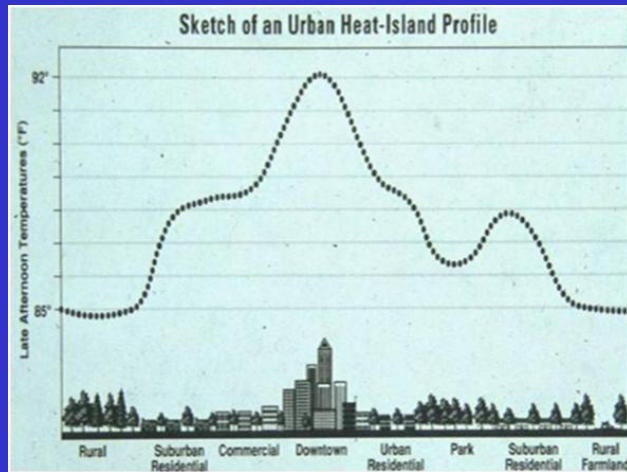
POLLEN



WG1 Environmental services of GI and UF and implications of climate change



Wood for energy



Microclimatic control

Water control



WG1 Environmental services of GI and UF and implications of climate change

- Qualitative and quantitative data on the environmental services (such as climate change mitigation, water control, phytoremediation, energy saving, microclimatic improvement) provided by UF and GI will be collated
- The activities of this WG will also focus on defining the threats represented by climate change on UF

WG2 Social/cultural services of GI and UF



Aesthetics and Quality of places

Education and



Learning

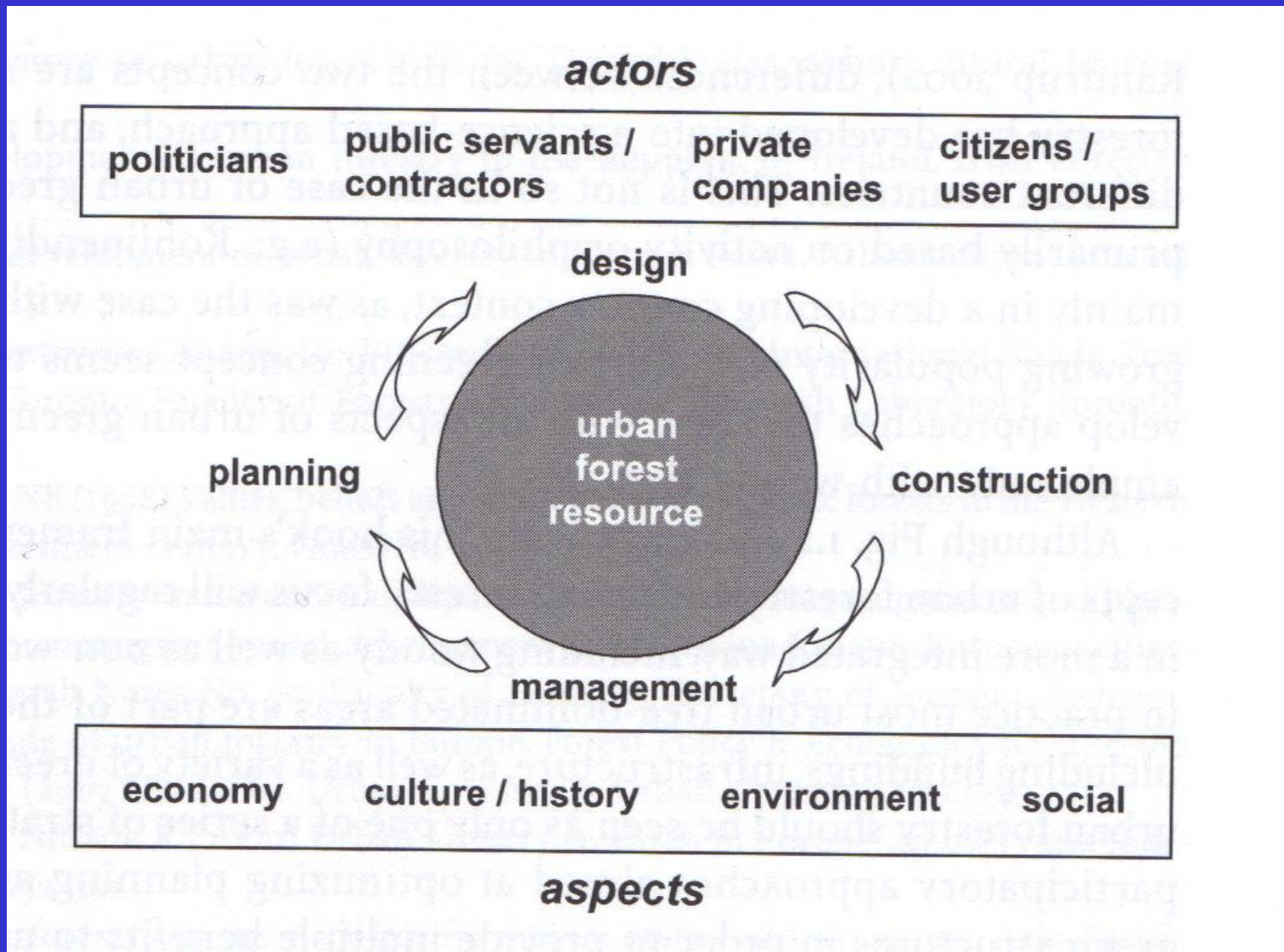
Recreation, Physical health and Well-being



WG2 Social/cultural services of GI and UF

- Qualitative and quantitative data on the social or cultural services (such as aesthetic, spiritual, recreational and education services) provided by UF and GI will be collated
- This WG will also consider evidence on the social distribution of ecosystem service provision from GI and UF to better understand how a more equitable distribution of benefits can be achieved and maintained.

WG3 Governance of UF in a GI approach



WG3 Governance of UF in a GI approach

- How the governance should be improved in order to maximize environmental and social benefits
- Comparison of governance in different countries and cities
- Costs and benefits of the different practices used in both planning and managing UF
- Development of indicators to be implemented in local, national or international regulations (roadmap for policy makers)

WG4 Task Force- Dissemination: interactive web-site

Questionnaires

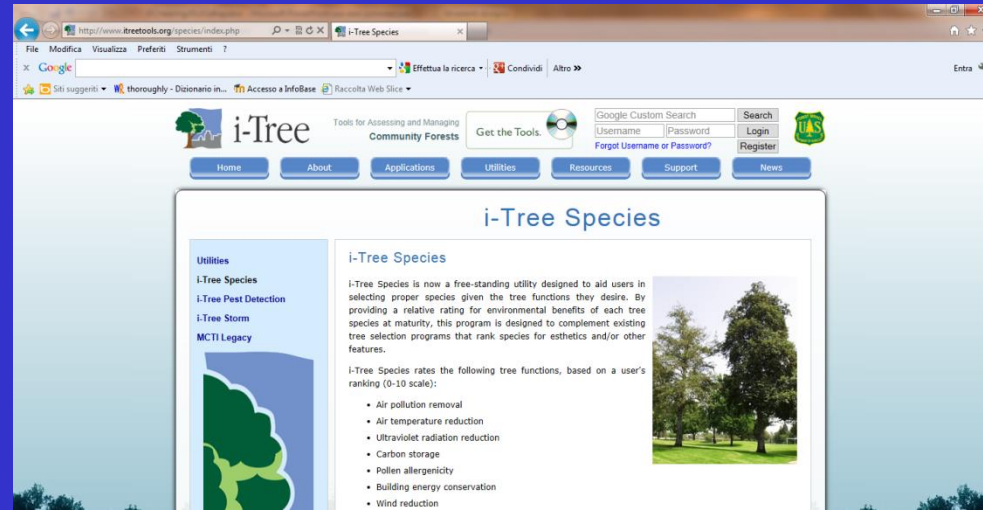
Gender: Male Female
What is your nationality? _____
Are you a student? Yes No If you are, what degree are you studying? _____
Have you ever lived abroad for more than 3 months? Yes No

- Do you think there is a gap between immigrants and British people?
Strongly agree Agree Not sure Disagree Strongly disagree
- Do you think that cultural diversity is good to UK society?
Strongly agree Agree Not sure Disagree Strongly disagree
- Do you think that immigrants will have impact on British identity?
Strongly agree Agree Not sure Disagree Strongly disagree
- Do you think that British people welcome new immigrants?
Yes No Don't know
- Immigrants should...
keep their own culture
integrate into UK society
- Do you think that immigrants should be able to claim for benefits as British people do?
Yes No Not sure
Why? _____

- What is the most important thing for immigrants to be fully integrated?

To speak fluent English	1	2	3	4	5
To get employment	1	2	3	4	5
To acquire the culture	1	2	3	4	5
To get the British nationality	1	2	3	4	5

Tools



Interviews



Links to events co-organized



WG4 Task Force- Dissemination: target audience

- **Scientific Communities:** it is evident that the MC of the Action will largely be constituted of scientists and that most of the STSM will be carried out within universities or research centers
- **GI and UF planners and managers:** an important target audience for dissemination of best practice for optimizing the ecosystem services provided by GI and UF will be private companies and technicians or officers of public administrations
- **International, national and local authorities:** the Action will provide a more thorough qualitative and quantitative understanding of the ecosystem services provided by GI and UF for this audience
- **Private citizens:** it is clear that most GI and UF in and around our cities belongs to private citizens. The general public are also clearly the beneficiaries of ecosystem services from GI and UF

WG 4 Task Force- Dissemination: the Urban Field Station



- Long-term Research Initiatives

- Knowledge Sharing

- Expanding Networks



OBJECTIVES

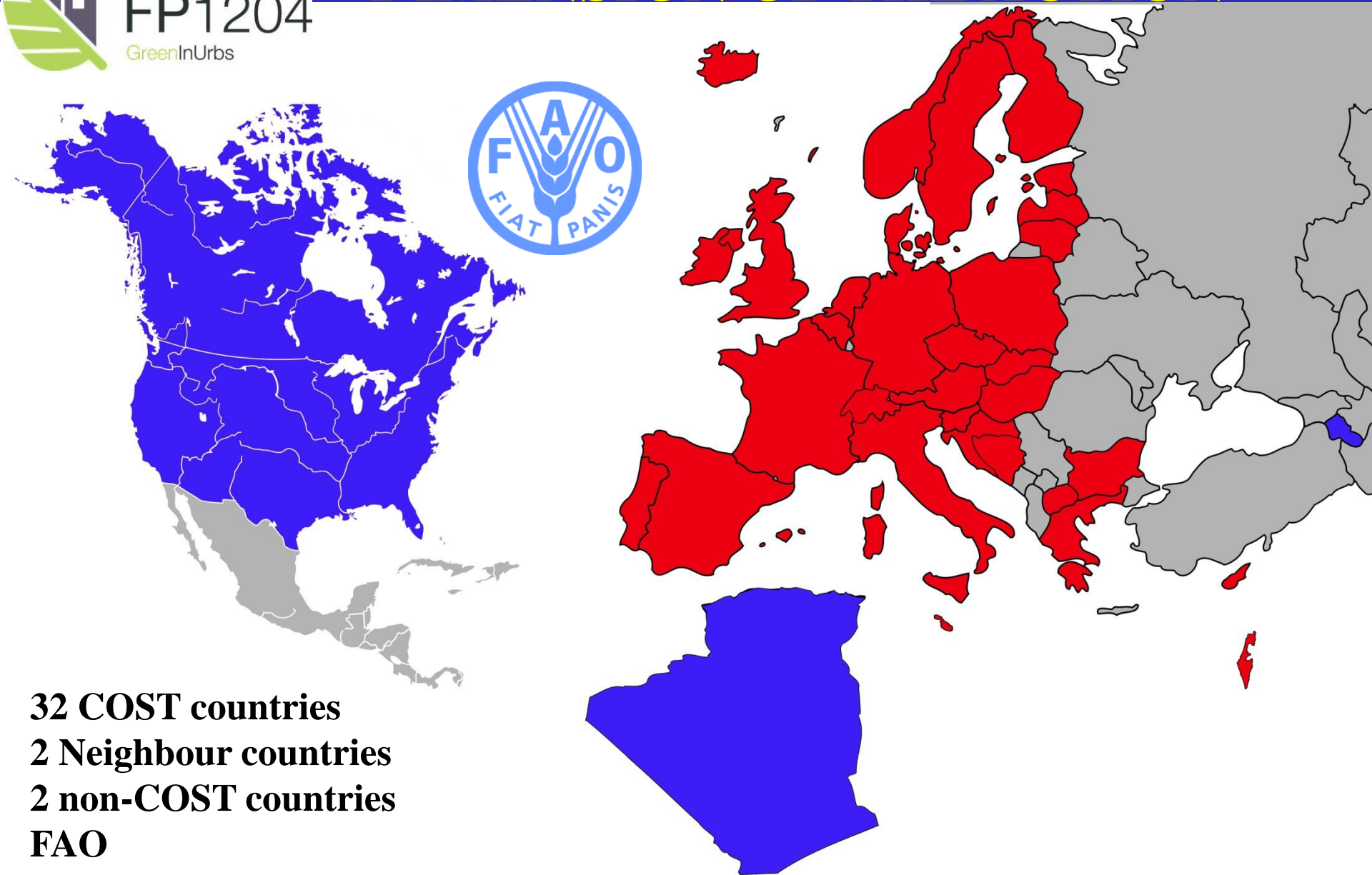
- To collate recent (qualitative and quantitative) findings from national or international programmes about the ecosystem services provided by GI and UF.
- To compare different approaches and conditions (climatic, socio-cultural, economic and urban planning) in the countries involved, in order to develop best practice guidelines for GI managers and decision makers to assist in the maximization of benefits from GI and UF.
- To define environmental and social indicators and thresholds in order to improve the environmental quality of our cities, and consequently the quality of life of European citizens.
- To provide scientific evidence in order to implement those best practice into legislation both at local, national and European level
- To identify the main priorities and challenges in terms of future research on GI and UF

DELIVERABLES

- 1) An interactive website (month 3)
- 2) A database collating all scientific evidence available on the above mentioned topics (month 24)
- 3) The results of questionnaires developed among all the countries involved in the Action (month 36)
- 4) Guidelines for managers and private citizens which will advise on the best tree species and the best practices for the maximization of benefits from GI and UF (month 48)
- 5) A scientific position paper to highlight research priorities and challenges regarding GI and UF (month 48)
- 6) Implementation and diffusion of models for the estimation of the benefits derived from UF (month 48)
- 7) A roadmap for policy makers in order to provide indicators, thresholds and tools to be included in legislation at local, national or European level regarding the governance of GI and UF (month 48)
- 8) A Book, including all the main achievements by the different WGs (month 48)

MILESTONES

- 1) The kick-off meeting at the beginning of the Action (3 month)
- 2) The annual workshops (month 12, 24, 36, 48)
- 3) The WG meetings, which will occur both in conjunction with the MC meetings and also through audio-conferences, particularly among smaller subgroups to develop specific initiatives (frequent)
- 4) Training Schools; it is anticipated that three Training Schools will be organized within this Action (month 21, 33, 45)
- 5) Final conference, where the results of the Action will be disseminated and new initiatives emerging from this Action will be launched (month 48)
- 6) Handbook of the STSMs, including the reports by the STSMs funded by the Action (month 48)



32 COST countries
2 Neighbour countries
2 non-COST countries
FAO

Timetable of the Action

14-02-2013/13-02-2017

Year	I				II				III				IV			
<i>Trimester</i>	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
Meetings	MC		SC		MC		SC		MC		SC		MC		SC	
Workshops				x				x				x		x		
Conferences																x
STSMs																
Training schools							x				x				x	
Web-site																
Book writing																
Guidelines prep.																
Publications																
WG 1																
WG 2																
WG 3																
WG4 (TF) dissemination																

MC: Management Committee; SC: Steering Committee

Links with other COST Actions

PAST

- E12 “Urban Forest and trees” ended in 2002
- E33 “Forests for Recreation and Nature Tourism (FORREC), ended in 2008
- E39 “Forests, Trees and Human Health and Wellbeing”, ended at the end of 2008
- C11 had the title “Greenstructure and urban planning” ended in 2004

CURRENT

- FP0903 Climate Change and Forest Mitigation and Adaptation in a Polluted Environment
- FP1001 Improving Data and Information on the Potential Supply of Wood Resources: A European Approach from Multisource National Forest Inventories
- TD1106 Urban Agriculture Europe (UAE)
- TU1201 Urban Allotment Gardens in European Cities - Future, Challenges and Lessons Learned

Links with international organizations

- European Environment Agency (EEA),
- Food and Agriculture Organization of the United Nations (FAO),
- ICLEI – Local Government for sustainability, Metropolis, United Cities and Local Government (UCLG),
- United Nations Forum on Forests (UNFF),
- United Nations Environment Programme (UNEP),
- UN-Habitat,
- Convention on Biodiversity (CBD) of the United Nations,
- World Health Organization (WHO) Action.

THANK YOU
Visit
www.greeninurbs.com



[HOME](#) [ORGANIZATION](#) [NEWS](#) [INTERACTIVE TOOLS](#) [WGS ACTIVITIES](#) [LINKS](#) [CONTACT](#)

